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“Can agroecological farming feed the world?
Farmers’ and academia’s views”

Agroecological practices and drivers of adoption by arable crop farmers, Cross River State, Nigeria

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Abstract

Global food production is plagued by a myriad of challenges such as climate change, population explosion, pollution, food quality and natural resources conservation. Agroecological farming is gaining recognition as one of the possible solutions to these challenges. However, the rate at which agroecological practices are being adopted has remained low. This study therefore examined the agroecological practices and drivers of adoption by arable crop farmers in Cross River State, Nigeria. A multistage sampling procedure was used to select 120 household heads. Data were collected with the aid of a set of structured questionnaire and were analysed using descriptive statistics and a multinomial logistic regression at 5% level of significance. Some of the agroecological practices adopted by arable crop farmers were: intercropping (100%); green manure (95.8%); and scarecrows (95%). Those least adopted were: using natural enemies (4.2%); no tillage (5.8%); and alley cropping (14.2%). The three main drivers of adoption of agroecological practices were: it boosts crop yields thereby ensuring food security (MS=4.89); inputs (e.g. local farm wastes) are locally available (MS=4.78); and it helps farmers to adapt to/and cope with climate change (MS=4.77). Some of the farmers’ perception on constraints to the use of agroecological practices were: increase demand for food and raw materials due to population growth leading to overexploitation of land and use of external chemical inputs (MS=4.79); lack of incentives to farmers from government to boost use of practices (MS=4.7); limited farmers’ awareness and knowledge on existing agroecological practices (MS=4.66). The binary logistic regression model showed that the chi square was not statistically significant ($\chi^2(8) = 10.99$; $p = 0.202$). Furthermore, sex ($p = 0.032$) and extension agent contact ($p = 0.027$) had significant positive effects on the adoption of agroecological practices at $p = 0.05$. In conclusion, government should promulgate policies that favour the adoption of agroecological practices, while agricultural extension services should be tailored towards farmers’ skills improvement for effective implementation of agroecological practices.

Keywords: Adoption, agroecological practices, arable crop farmers, drivers, sustainable agriculture